

GENERAL SCIENCE

Giannini Sues Government

The Giannini Company has filed suit against the U. S. Government for compensation to Dr. Fermi for use of his patent on atomic energy processes.

► THE question of how far one individual may patent the laws of nature will probably be reopened in connection with the suit filed against the U. S. Government by the G. M. Giannini Co., of Pasadena, Calif., for compensation to Dr. Enrico Fermi for use of his patent on atomic energy processes.

The U. S. Patent Office, having granted the patent to Fermi and his co-workers in 1940, has no further jurisdiction over the matter. It is up to the Court of Claims to determine whether it has jurisdiction in the case, and, if so, whether Dr. Fermi should receive compensation for use of his process for non-military purposes, or whether his claims are too broad. The claims specified use of neutrons for production of radioactive isotopes two years before it was known that they would produce a chain reaction.

The patent which is the basis for the \$10,000,000 suit was issued July 2, 1940, on an application dated 1935. A similar patent was applied for in Italy in 1934. The inventors are listed as Enrico Fermi, Edoardo Amaldi, Bruno Pontecorve, Franco Rasetti and Emilio Segre of Rome, Italy, and it was assigned to the Giannini Co., at that time in New York City.

The patent states that it relates to production of isotopes by reaction with neutrons, especially for production of artificial radioactivity. It specifies use of low energy neutrons instead of charged particles to produce nuclear reactions, and mentions hydrogen, beryllium, carbon, silicon and lead as materials which will slow neutrons down to the energies needed. This is the description of the atomic pile, in which carbon, in the form of graphite bricks, controls the neutrons. Fermi's specification for producing neutrons is the same as that used today, a mixture of radon and beryllium.

The form of the atomic pile planned by Fermi, however, was made of paraffin or other material rich in hydrogen, or else a tank in which material to be irradiated was to be dissolved in water, either the usual kind or "heavy water." While this kind of pile has not been used on a large scale, experimental work has proved it to be efficient.

Fermi's idea of using so-called slow neutrons proved the key to the two successful processes for atomic energy, fission of uranium 235 and production of plutonium.

Science News Letter, September 2, 1950

GENERAL SCIENCE

Draft by Occupation

► A RADICAL new method of drafting men for the armed forces whereby they might be called up by occupation instead of by order number is being quietly pushed through Congress by the administration, Science Service has learned.

Under the new system, if the army wants 100 automobile mechanics, it can call them up directly instead of hoping to get them in a general draft.

The authority to do this is contained in a new bill presented August 22 to a subcommittee of the Senate Armed Services Committee. It provides that the President can order the registration and drafting of "professional, technical, scientific, specialist and other occupational categories."

It is the "and other categories" phrase under which the automobile mechanics—or cooks or truck drivers—could be drafted directly.

The new bill was presented to the subcommittee at a meeting which discussed the Gurney bill that would give the Presi-

dent the power to draft doctors and dentists. Various amendments to this bill to include the registration of all scientific personnel were presented but it looks now as though the Gurney bill will be confined to members of the healing arts professions. The new bill will take care of scientific personnel "and other categories."

Scientists are worried that the call-up of their colleagues under the new bill would be administered by the present Selective Service System which, they claim, does not have the competence to do the job, either on the national or local level. A top scientist, perhaps Dr. Vannevar Bush or Dr. Karl T. Compton, will shortly present to the President a proposal for a Scientific Selective Service Board to register both men and women with scientific skills and to call them up if necessary.

However, National Security Resources Board officials who wrote the new overall registration bill claim that authority to draft men by occupations would be taken away

from the Selective Service System under the language of the bill and placed in the hands of the President. It is possible that the President would designate the NSRB as the agency to handle this occupation draft.

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VETERINARY MEDICINE

Animal Diseases Which Attack Man Studied

► UNDULANT fever, known to be transmitted in unpasteurized milk, is also widely carried by the meat from hogs, cattle and goats which have brucellosis, it was reported in Miami Beach, Fla.

Research workers at Purdue University found brucellosis germs in hog carcasses kept three weeks in cold storage, the American Veterinary Medical Association was told.

The painful disease which the germs can cause in human beings is a serious occupational hazard of packing-house workers and farmers who butcher their own meat.

Brucellosis has been transmitted through the semen of an infected bull to susceptible heifers and cows by artificial insemination, Drs. C. A. Manthei, D. E. DeTray and E. R. Goode, Jr., of Beltsville Md., told the annual veterinarians convention.

Public health workers as well as veterinarians are attacking animal diseases which also strike at humans. These include brucellosis, rabies and Newcastle disease in poultry.

Scientists at the University of Maryland have found that the Newcastle disease virus is deadly in a wide variety of mammals such as hamsters, sheep, a calf and white mice. In Rhesus monkeys, an animal believed to closely approximate reactions in man, the virus produced paralysis and death.

The fact that more than a third of the meat eaten in this country has inadequate sanitary inspection points up the hazard from such diseases, Dr. H. G. Bailey of Savannah, Ga., told the convention. Only meat shipped across state lines now comes under federal inspection, he pointed out. The rest is subject only to checking by state or municipal health officers.

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● R A D I O

Saturday, September 9, 3:15 p. m. EDST

"Adventures in Science" with Watson Davis, director of Science Service over Columbia Broadcasting System.

Mr. Davis will discuss the chemical advances as revealed at the Chicago meeting of the American Chemical Society and the National Chemical Exposition.